

## G-LiHT Data Products and Distribution System

Completed Technology Project (2012 - 2013)



## Project Introduction

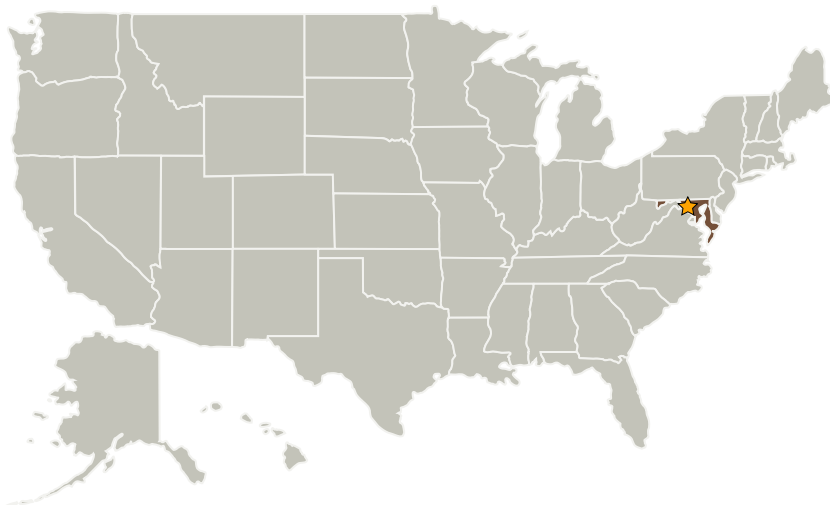
G-LiHT is a portable, airborne imaging system that simultaneously acquires data on the composition, structure, and function of terrestrial ecosystems.

An IRAD award in FY 2011 enabled the G-LiHT concept to be designed, assembled, installed and tested on a NASA fixed-wing, airborne platform.

## Anticipated Benefits

*G-LiHT* was successfully integrated and flown onboard NASA's Cessna 206H as part of a FY2011 IRAD project. During these initial flights, lidar, thermal, and VNIR instruments met or exceeded the expected performance of these sensors.

## Primary U.S. Work Locations and Key Partners

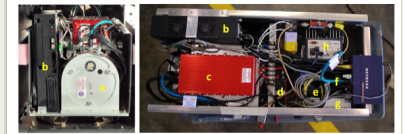


Organizations Performing Work	Role	Type	Location
★ Goddard Space Flight Center (GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

## Primary U.S. Work Locations

Maryland

Figure 2. End and top views of G-LiHT instrument package, showing the (a) scanning LiDAR; (b) data acquisition computer; (c) GPS-INS; (d) irradiance spectrometer; (e) imaging spectrometer; (f) thermal infrared camera; (g) GPS time server; and (h) profiling LiDAR.



## G-LiHT Data Products and Distribution System Project

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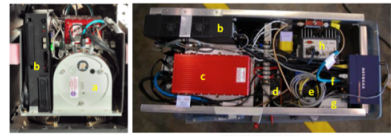
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## Images

Figure 2. End and top views of G-LiHT instrument package, showing the (a) scanning LIDAR; (b) data acquisition computer; (c) GPS-INS; (d) irradiance spectrometer; (e) imaging spectrometer; (f) thermal infrared camera; (g) GPS time server; and (h) profiling LIDAR.



### G-LiHT Data Products and Distribution System Project

G-LiHT Data Products and Distribution System Project  
(<https://techport.nasa.gov/image/4076>)

Figure 3. (a) G-LiHT installed on NASA's Cessna 206; (b) wing-mounted pod showing mounting points common to all Cessna 206s; (c) view ports on bottom of custom pod.



### G-LiHT Data Products and Distribution System Project

G-LiHT Data Products and Distribution System Project  
(<https://techport.nasa.gov/image/4077>)

## Project Website:

<http://sciences.gsfc.nasa.gov/sed/>

## Organizational Responsibility

### Responsible Mission Directorate:

Mission Support Directorate (MSD)

### Lead Center / Facility:

Goddard Space Flight Center (GSFC)

### Responsible Program:

Center Independent Research & Development: GSFC IRAD

## Project Management

### Program Manager:

Peter M Hughes

### Project Manager:

Matthew J McGill

### Principal Investigator:

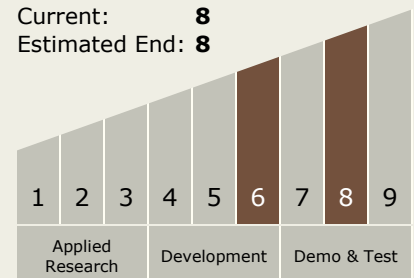
Bruce D Cook

## Technology Maturity (TRL)

Start: 6

Current: 8

Estimated End: 8





## Technology Areas

### Primary:

- TX08 Sensors and Instruments
  - └ TX08.1 Remote Sensing Instruments/Sensors
    - └ TX08.1.1 Detectors and Focal Planes